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## NARC scientists developing hybrid rice

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Scientists at the Agro-Botany Division of the Nepal Agricultural Research Council (NARC) have been working to develop hybrid rice using native wild species.

They are also developing a technology to transfer useful traits of the wild rice species to the cultivating ones.

"We have already completed some 20 per cent work in the last two years," one of the three scientists involved in the work, Raj Kumar Niroula, said adding: "Besides, we are also trying to develop a technology to transfer the useful traits of four native wild rice species to the cultivating species of rice grown in Nepal."

In their endeavour to develop a technology for the hybrid rice scientists have been encouraged with their recent success in developing the technology to cross the wild rice with the cultivating ones. Niroula said two species of wild rice — *Oryza Nivara* and *Oryza Rufipogon* — are similar to the cultivating species. The native wild species of Nepal are *Oryza Nivara*, *Oryza Rufipogon*, *Oryza Officinalis* and *Oryza Granulata*. Some 22 wild species of rice are found in the world.

According to Dr Madhusudan Prasad Upadhyaya, presently the scientists are busy develop-

ing the Cytoplasmic Male Sterility (CMS) line, which is a requirement for the hybrid technology. He also said it is very difficult to cross the cultivating species with the wild rice and therefore the scientists have been crossing the two developing a special technology.

Upadhyaya said the traits of wild rice species of Nepal have been spelled out in the ancient scripture Vedas.

"If the government could provide Glasshouse that can control temperature we could develop the technology for the hybrid rice within the next four years," Niroula said adding that with the existing facilities available it will take at least six more years. Other two involved in the work include technical officer Shaligram Gupta and senior scientist Dr Upadhyaya, who is heading the Agro-Botany Division of the NARC.

According to Niroula, out of the two cultivating species *Oryza Sativa* is widely cultivated in Asia while the cultivation of *Oryza Glaberrima* is limited to African continent only.

Niroula further said the scientists have also thought of transferring the perennial trait of the *Oryza Rufipogon* to the cultivated species so that they can be cultivated for many years. "But this needs more dedication and budget," he added.